

Work Order ID 128762

128762

Page 1

January-23-15 2:42:49 PM

Item ID: D3537-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Wearpad
 Start Date: 1/23/15 Start Qty: 60.00 ***60*** Cust Item ID:
 Required Date: 2/04/15 Req'd Qty: 60.00 ***60*** Customer:
 Reference:

Approvals: Process Plan: MCS Date: 150126 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3537	D								

110 FLOW WATER JET 0.00
110
 Waterjet Memo 0.00 72 Ø Jm 15-1-28
 FLOW CNC Waterjet 1-Cut D3537-1 as per Dwg D3537
304.063 Dwg Rev: 0
 Prog Rev: 0
 2-Deburr if necessary

120 QC2- Inspect parts off machine FAI/FAIB 0.00
120
 QC Memo 0.00 72 Ø Jm 15-1-28
 Quality Control

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 Required Date: 2/04/15 Req'd Qty: 60.00 ***60*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				<u>73</u>			38 9-89 JAN 29 2015
140 *140* Brake NC Brake NC	Form as per dwg NC BRAKE Memo	0.00 0.00			DAS 30 9-89	<u>73</u>			15/02/04
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<u>73</u>			38 9-89 FEB 04 2015

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 Item Name: Wearpad
 Start Date: 1/23/15 Start Qty: 60.00 ***60*** Cust Item ID:
 Required Date: 2/04/15 Req'd Qty: 60.00 ***60*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Large Fab	Weld per dwg A/R Hardcoat S.S. Batch: _____ Large Fab	0.00				<u>53</u>			<u>15-03-31</u> <u>MBL</u>
	Memo	0.00							
Large Fab	A/R 2059B Hardcoat BATCH: <u>131090</u>								
170 *170* QC	QC10- Inspect visual per QSI004- ground welds	0.00				<u>53</u>	<u>15-4-6</u>		DAS 50 9-89
Quality Control	Memo	0.00							
180 *180* QC	QC5- Inspect part completeness to step on W/O	0.00				<u>53</u>	<u>15-4-6</u>		DAS 50 9-89
Quality Control	Memo	0.00							DAS 38 9-89

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Item ID: D3537-1 Accept ***N900040100*** Setup Start ***NS1***
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 Item Name: Wearpad
 Start Date: 1/23/15 Start Qty: 60.00 ***60*** Cust Item ID:
 Required Date: 2/04/15 Req'd Qty: 60.00 ***60*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: <u>FP-001</u>	0.00							
210									
Packaging	Memo	0.00							
Packaging									
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.00							
Quality Control									

Handwritten: MS-H-6

Picklist Print

January-23-15 2:42:49 PM

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Work Order ID: 128762

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Parent Item: D3537-1

D3537-1

Parent Item Name: Wearpad

Start Date: 1/23/15

Required Date: 2/04/15

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP Rev:A New Issue 07-02-14 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S16GA

Purchased

No

100

sf

0.0000

0.106

7

M304S16GA

**

Jm 15-1-28

304/316 Sheet .063

m131384

m131384.

DART AEROSPACE LTD		Work Order:	
Description: Wearpad		Part Number:	D3537-1
Inspection Dwg: D3537	Rev: <i>C D</i>		
		Page 1 of 1	

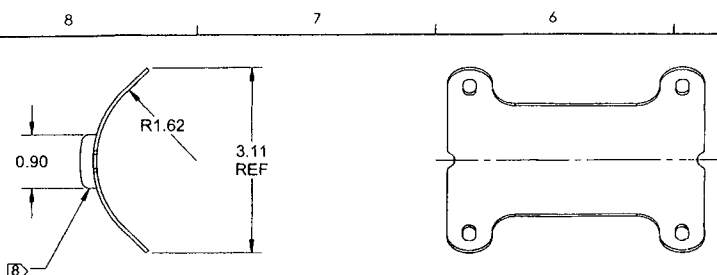
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.250	+/-0.010	4.252"	-		V	Jkmo.
3.500	+/-0.010	3.503"	-		V	
1.965	+/-0.010	1.970"	-		V	
2.795	+/-0.010	2.796"	-		V	
3.625	+/-0.010	3.627"	-		V	
0.220 x 0.380	+/-0.010	0.223" x 0.384"	-		✓	

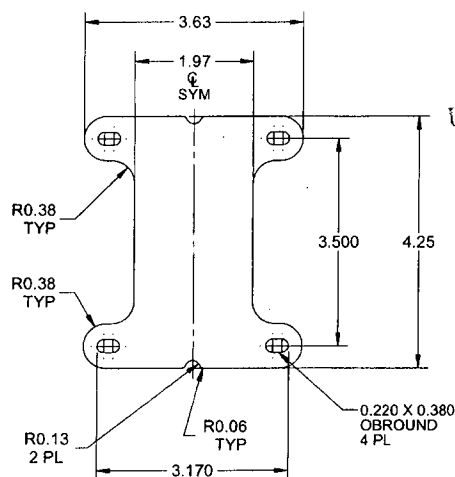
Measured by: <i>Jm</i>		Audited by: <i>38</i>		Prototype Approval:		N/A
Date: <i>15-1-28</i>		Date: <i>JAN 29 2015</i>		Date:		N/A

Rev	Date	Change	Revised by	Approved
A	07.03.21	New Issue	KJ/JLM	
B	07.04.27	Dimensions revised per Dwg Rev. B	KJ/JLM	
C	07.05.28	Dimensions revised per Dwg Rev. C	KJ/JLM	<i>[Signature]</i>



D3537-1 WEARPAD
(MAKE FROM D3537-1F)

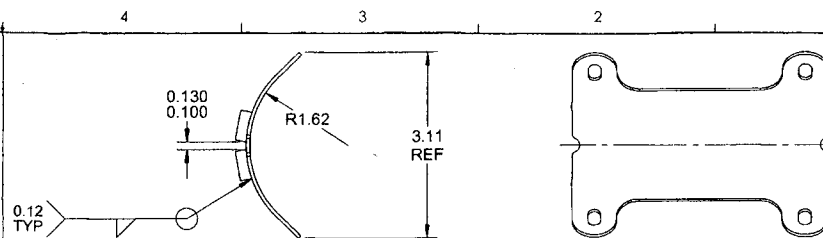
0.25
TYP



D3537-1F FLAT PATTERN

NOTES:

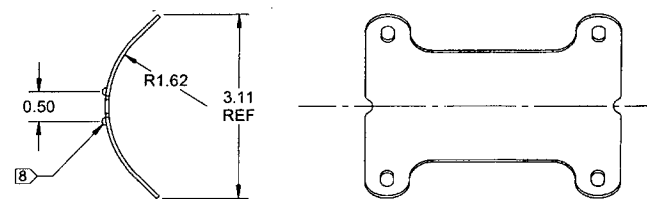
- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 16 GAUGE (0.063) PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 PER DART SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-1" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.42 lbs
- 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
- 9) WELDING: PER QSI 004



D3537-5 WEARPAD
(MAKE FROM D3537-1F)

NOTES:

- 1-5) AS PER D3537-1
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-5" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.42 lbs
- 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
- 9) WELDING: PER QSI 004



D3537-9 WEARPAD
(MAKE FROM D3537-1F)

NOTES:

- 1-5) AS PER D3537-1
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-9" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.19 lbs
- 8) APPLY 2059B HARDCOAT WELD BEAD, 0.06 TO 0.13 THICK ON BOTTOM SURFACE, AFTER FORMING
- 9) WELDING: PER QSI 004
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.02-0.04 THICK, PER DART QSI 005 4.9

D	RE-FORMAT DRAWING, ADD -9/-11 WEARPADS	DB	14.10.16
C	WIDEN TAB TO 0.380, WELD PATTERN	CB	07.04.13
B	ADD AMS 5513 AND AMS 5524	CB	07.03.20
A	NEW ISSUE	CB	06.11.06
REV.	DESCRIPTION	BY	DATE
DESIGN	CB	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	DB		
CHECKED	DW	DRAWING NO.	REV. D
MFG. APPR.	DD	D3537	SHEET 1 OF 2
APPROVED	MP	TITLE	SCALE
DE APPR.	D3	WEARPAD	NTS
DATE	14.10.16	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2014-11-05

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

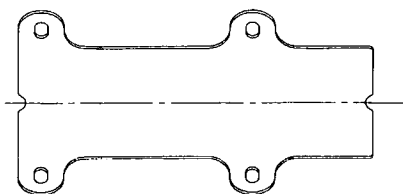
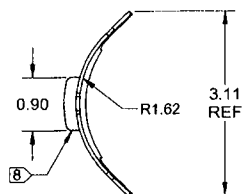
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

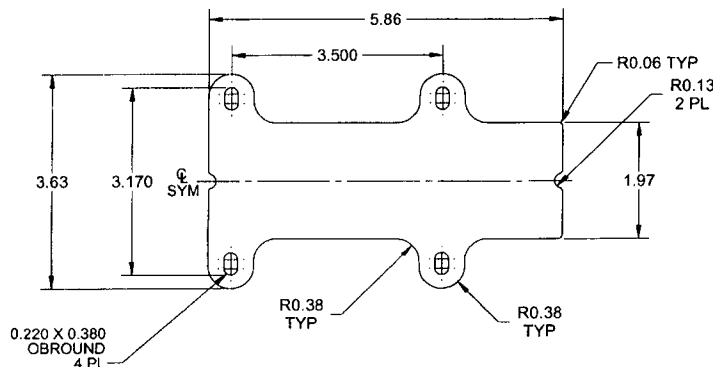
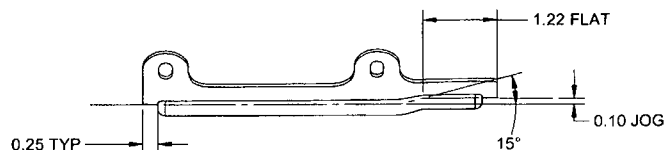
FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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8 7 6 5



D3537-3 WEARPAD
(MAKE FROM D3537-3F)

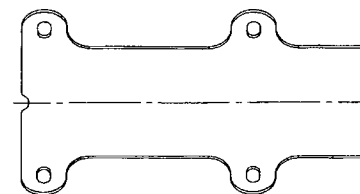
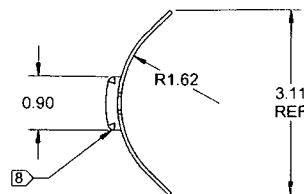


D3537-3F FLAT PATTERN

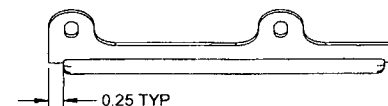
NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 16 GAUGE (0.063) PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240 PER DART SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-3" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.50 lbs
- 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
- 9) WELDING: PER QSI 004

4 3 2 1

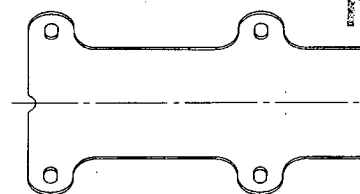
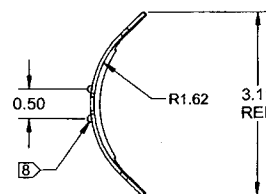


D3537-7 WEARPAD
(MAKE FROM D3537-3F)

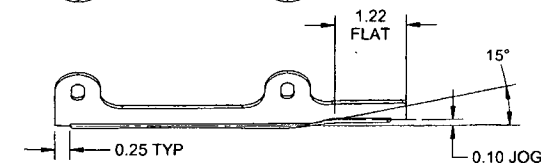


NOTES:

- 1-5) AS PER D3537-3
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-7" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.50 lbs
- 8) APPLY 2 LAYERS OF 2059B HARDCOAT WELD TO WITHIN 0.25 OF WEARPAD ENDS, 0.19 TO 0.25 THICK
- 9) WELDING: PER QSI 004



D3537-11 WEARPAD
(MAKE FROM D3537-3F)



NOTES:

- 1-5) AS PER D3537-3
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3537-11" PER QSI 044 6.1 (PERMANENT MARKER)
- 7) WEIGHT: 0.25 lbs
- 8) APPLY 2059B HARDCOAT WELD BEAD, 0.06 TO 0.13 THICK ON BOTTOM SURFACE, AFTER FORMING
- 9) WELDING: PER QSI 004
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.02-0.04 THICK, PER DART QSI 005 4.9

APPROVED

DESIGN	DB	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	DB		
CHECKED	DW	DRAWING NO.	REV. D
MFG. APPR.	DD	D3537	SHEET 2 OF 2
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WEARPAD	NTS
DATE	14.10.16	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMER OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2014-11-05

DQA:

Date: 15/05/05



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: 15/05/01

Work Order update only ☐

Work Order: 128762	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. D3537-1		Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. 15-4847		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☒	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	150406	160	19	Welds were not acceptable RC. parts was welded by an employee in training	PD 150406	Scrap + destroy no replace	EL 15-46	PD 1504-06	PD 1504-06
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training ☒									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General
☐ Bending	☐ Bend
☐ Centre Not Concentric	☐ BOM/Route
☐ Cracks	☐ Broken/Damage/Defect
☐ Crimp/Kink/Ripple/Wave	☐ Burrs
☐ Cuffs	☐ Contamination
☐ Crushing	☐ Countersink
☐ Heat Treat	☐ Cut Too Short
☐ Inspection Strip in Tube	☐ Drawing
☐ Marks/Chatter	☐ Drill Holes
☐ Turning Sequence	☐ Finish
☐ Wave/Twist in Tube	☐ Fit/Function
	☐ Folio/Program
	☐ Grain
	☐ Hardware
	☐ Inspection Incomplete/Unqualified
	☐ Instructions Incomplete/Unclear
	☐ Misaligned/off center
	☐ Mislabeled
	☐ Misread
	☐ Off-set
	☐ Out of Calibration
	☐ Out of Sequence
	☐ Outside Dimensions
	☐ Over/Under tolerance
	☐ Part Incorrect
	☐ Part Lost/Missing
	☐ Part Moved
	☐ Positioned Wrong
	☐ Power Loss/Surge
	☐ Pressure/Forced
	☐ Set-up
	☐ Temperature/Cure
	☒ Weld
	☐ Wrong Stock Pulled
	☐ Other